ABSTRACT

A power saving device for a light emitting diode (LED) lamp mounted to an existing fixture for a fluorescent lamp having a ballast assembly and LEDs positioned within a tube and electrical power delivered from the ballast assembly to the LEDs. The LED lamp includes means for controlling the delivery of the electrical power from the ballast assembly to the LEDs wherein the use of electrical power can be reduced or eliminated automatically during periods of non-use. Such means for controlling can include an on-off switch mounted in the tube or can also include a current driver dimmer mounted in the tube that regulates the amount of power delivered to the LEDs. A computer or logic arrays control the dimmer or power switch. A sensor such as an occupancy motion detection sensor mounted external to the tube or within the tube can send signals to the computer or logic array to trigger a switch or control a dimmer. Two or more such LED lamps with one or more computers or logic arrays in network communication with sensors can be controlled, so as to reduce flickering between lamps when illumination areas are being alternately occupied. Preset or manually set timers can control switches or be used in combination with the computer, logic array, and dimmer.